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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,525	12/26/2000	Qingwen Hu	91436-286	2154

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EXAMINER

NGUYEN, QUYNH H

ART UNIT	PAPER NUMBER
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2642

DATE MAILED: 07/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/745,525

Applicant(s)

HU ET AL.

Examiner

Quynh H Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ash et al.

(U.S. Patent 4,669,113).

Regarding claims 1, 9, 14, 24, 32, and 33, Ash et al. teach in integrated network controller for a dynamic nonhierarchical dynamic routing on the alternate paths available in the switching system, the data network including a plurality of switches (Fig. 2, SW 10) and a plurality of links connecting the switches (Fig. 2, 11), the method comprising: at a given one of the plurality of switches (Fig. 2, SW 10), each of the switches contains memory for storing information regarding the trunk links between itself and other switches (col. 2, lines 22-32), where the one of the plurality of links connects to the given one of the plurality of switches. Ash et al. further teach the routing sequences to minimize potential blocking in the network by evaluating the least loaded path for each potential connection of two switches in the system (Abstract and col. 4, lines 58-68), then preplanning changes in the first choice path and any required changes in the subsequent choice paths to the switching offices (col. 8, lines 59-68).

Ash et al. do not teach initializing a first degree of adaptation if the utilization of the trunk exceeds a first threshold.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature of adapting different degree of adaptation in case of the trunks exceeds threshold, in Ash's system in order to have a better system with different choice paths "degree of adaptation" according to different level of defined threshold.

Regarding to claims 2, 10, 15, 25, 34, and 41 Ash et al. teach consulting the database and based on data in the database such as: peg counts, overflow counts, usage counts arriving from network (col. 7, lines 9-18) to determine a course of action.

Regarding claims 3-8, 30, 31, 35-37, and 42 Ash et al. teach trunks in service table, trunk status map database, routing database, and routing candidate list that contains lists of the path candidates for each originating switch (OS) - terminating switch (TS) pairs in the network, each OS-TS pair has a unique routing sequence and each routing sequence has a "first choice" path and "subsequent choice" paths (col. 7, line 1 through col. 8, line 48) reads on claimed "the specific characteristics relate to a priority of the new connections, relate to a destination or source of the new connections". However, Ash et al. do not suggest detailing first degree of adaptation comprises preventing new connections having specific characteristics from being established on the trunk and indicating that the trunk is no longer active if the utilization of the trunk falls below the first threshold for a preset downgrade duration. It would have been obvious to one of ordinary skill in the art to incorporate the mentioned above feature in Ash's system in order to avoid connecting to inactive trunk.

Claims 11-13, 38 are rejected for the same reasons as discussed above with respect to claims 3-8. However, Ash et al. do not teach identifying a misbehaved connection trunk and sending a congestion notification to a source of the misbehaved connection. It would have been

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obvious to one of ordinary skill in the art to incorporate the mentioned above feature in Ash's system in order to avoid connecting to misbehaved trunk.

Regarding claims 16-22, 26-29, and 39, Ash et al. teach a routing database contains two lists of the path candidates for each OS-TS ("path and trunk connects of switches") pairs in the network ("candidate connection"), each path candidate may be designated as primary candidate, a secondary candidate, a final routing candidate, etc. (col. 7, lines 27-47) reads on the third degree of adaptation; selecting the candidate connection is based on specific characteristics of the information stored in memory (col. 2, lines 22-32); and it would have been obvious to establish the alternate path before the connection is removed from the path to maintain the communication link and avoid service interruption that would affect value of customer service and lost of revenue.

Regarding claim 23, it would have been necessary to repeat the selecting process for additional candidate if the utilization of the trunk continues to exceed the threshold to minimize potential blocking and overflow in the network.

Claim 40 is rejected for the same reason as discussed above with respect to claim 1. Furthermore, Ash et al. teach computer-executable instructions (Fig. 7-9).

Claims 43-46 are rejected for the same reason as discussed above with respect to claims 7, 8, 11, and 16.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lefort et al. (U.S. Patent 5,953,403) teach method for preventing call congestion on outgoing trunks of a local telephone exchange. Frey et al. (U.S. Patent 5,253,288) teach alternate

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destination call redirection for telecommunications systems. Yamamoto et al. (U.S. Patent 4,991,204) teach adaptive routing control method.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quynh H. Nguyen whose telephone number is 703-305-5451. The examiner can normally be reached on Monday - Thursday from 6:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

qhn

Quynh H. Nguyen  
July 10, 2003

  
AHMAD MATAR  
SUPERVISORY PATENT EXAMINER  
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